February 21, 1989

TO: Wayne Hedberg, Permit Lead
FROM: Scott Johnson, Reclamation Engineer
SUBJECT: Reclamation Plans, Hecla Mining Company, Escalante Silver Mine, M/021/004, Iron County, Utah.

I have completed my review of the last submittal of Hecla, received January 26, 1989, for the Escalante Silver Mine. Below are my comments:

R613-004-105. Maps, Drawings and Photographs

Previously submitted maps are adequate. With the 01-26-89 submittal, the operator included a map (scale 1" = 2000') showing the location of pre-law shafts on the property. The operator claims these shafts are difficult to access and will not reclaim them.

R613-004-108. Hole Plugging Requirements

The operator has plugged over 200 exploration holes since November, 1988. There are still several water wells on the property that need reclaimed. Some of these may have acceptable post-mining uses -- for instance, the ranchers in the area may use them for irrigation.

R613-004-109. Impact Assessment

The major impact from this operation is the long range effect the tailings impoundment will have. The operator needs to begin a study to determine the best method of final reclamation for this area.

Another concern is the groundwater. At peak production, the mine was discharging 26,000 gallons-per-minute into the canal systems. Since the mine shutdown, this water has flooded the mine to become part of the groundwater system.

R613-004-110. Reclamation Plan

The operator plans on burying the South canal liner during reclamation. There is approximately 6,000 square yards of this polyethylene liner in the canal. Does Hecla need a permit (i.e., solid waste) from the County to bury this?

The tailings impoundment has not been included in the reclamation plans. The operator will continue to use this impoundment until the ore stockpile is exhausted, which will probably be in 1990. When do we want the operator to submit a plan for the decommissioning of this impoundment?

R613-004-111. Reclamation Practices

The operator plans to cover all culverts that are difficult to salvage (i.e., running under paved County roads). This practice will leave a void under the roadway. Since any culvert will deteriorate over time, I recommend we stipulate the following:

a) fill the void with a sand and gravel mixture; and
b) cap the ends of the exposed culvert with concrete.

I think this will prevent future collapse of the road and prevent children from accessing the culvert.

By now, the operator has filled most of, if not all, of the post-law ventilation shafts. The only remaining entrance to the mine is the decline adit. Although MSHA requires the operator to fence this portal, we should also require the operator to post a warning sign on this locked fence.

R613-004-113. Surety

The operator will probably request reduction in the surety amount -- currently an irrevocable letter of credit in the amount of $119,574 -- as he completes the final reclamation. Instead of several revisions to this surety, I suggest we wait until later this year when all the reclamation -- except for the tailings impoundment, mill, roads, and office complex -- is completed.

MN60/5-6
cc: Holland Shepherd

RECLAMATION WORK NEEDED TO BE DONE

1. Fill old shaft, place 2' concrete plug and fill to surface.
2. fill south vent raise to surface.
3. Plug the rest of the 6" VCR hole on 2,3,4,5 south stopes. Plug diamond drill holes.
4. Build 1' reinforced concrete plug in decline, fill with rock and reclaim.
5. Blast concrete in the lift station, fill and reclaim.
6. Reclaim surface of stopes 2,3,4 north, "E" Vein and 2,3,4,5, south.